

Method for Fluid Separation Devices Using A Fluid Pressure Balanced Configuration

Abstract

A method for separating a composite fluid into components in a centrifugal fluid separation system. The system includes a rotor that has a composite fluid containment area, an inlet channel, a peripheral separation channel, outlet channels and separated component collection areas, which together form a processing area. The separation channel may be semi-spiraled. The inlet channel may connect to the center of the separation channel and an outlet channel may connect to each end of the separation channel. The outlet channels have different heights. The ends of the separation channels may have different heights. The separation channels may have extensions. The rotor may have multiple processing areas. The collection areas may be pockets slanted radially outwardly and downwardly. A motor may produce a rotating magnetic field, which co-acts with a magnetically reactive material in the rotor. A disposable bag and tubing system may be used in a processing area of the rotor.